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German Pamphlet.

THE CAUSE OF GREECE THE CAUSE OF EUROPE.

London, August 1821.

The Turks having first entered Europe in the year 1338, and established themselves in Adrianople in 1360, took possession of Constantinople in the year 1453, and by successive conquests founded a power in our part of the globe, which subjugated the inhabitants of the conquered countries, which threatened the neighbouring states, and even alarmed more distant nations. They have now kept a footing in Europe for more than four centuries, connected not only with the Greeks, but also with most of the nations of Europe, who have been attracted either by policy or interest to hold with them both commercial and political intercourse. Nevertheless they have remained to the present day, what they were when the first Turkish vessel touched the European coast,—Asiatic barbarians, having nothing in common with the nations of Europe except the soil. Our manners and civilization, our arts and sciences, have still remained for ign to them. It would be difficult to point out one invention, with the exception of gunpowder and fire-arms, which they have adopted. Even if one did not know their origin, they distinctly proclaim themselves to be Asiatic. In their manners and modes of domestic life, the degradation and slavery of the women, the practice of polygamy and employment of eunuchs, they are as thoroughly Asiatic in their creed. The despotism which they exercise, and the servitude and degradation to which their victims are subject, their language, and even their dress and costume, and their obstinate contempt of every thing foreign, are all strictly Oriental. Asiatic barbarians they came into Europe, and Asiatic barbarians they remain to the present day.

To the oppressive rule of these barbarous usurpers an illustrious and numerous people, to whose ancestors we are indebted for a great part of our civilization, are now subjected. It is true that their punishment has not been wholly unmerited; they had been degenerating for centuries, and the usual effect of long-continued slavery, which produces dissimulation and cunning, has been fully manifested among the Greeks. In some parts they have even themselves become barbarians, and at the time they were conquered not a few of them were drawn over to the Mahometan faith. They have, nevertheless, not only remained a nation, but are still a European nation. They still speak the language of their forefathers, however it may have suffered in the lapse of time, or degenerated with the degeneration of the national character. They still profess and practise the faith which obtains in Europe, and conform to European customs. They build and preserve their villages and cities with the same activity and industry as other European nations, while those of the indolent Turk are suffered to fall into ruins; and they pursue both domestic and foreign traffic with indefatigable attention. Nor have they forgotten their relationship with the rest of Europe, but have remained with them in intellectual intercourse. The classic works of the English, French and Germans have been translated into modern Greek; and those who are able to obtain the advantages of a foreign education, repair, not to Morocco, but to Paris, London, or Vienna. At no time have they forgotten Europe or its science, and of late years especially the youth of Greece have resorted to Vienna, Munich, Göttingen, and Leipsic, as well as other European cities, anxious to recover and restore that wisdom which distinguished their fathers, but which had so long forsaken its original source, and to enrich themselves

by the acquisition of modern languages, and modern improvements. These men, in every respect Europeans, not only ruled by Asiatic barbarians, but also oppressed and degraded, have at length risen to throw off their long-endured yoke of slavery. They claim a national existence, independent of foreign control, and demand back, with arms in their hands, the first and most sacred right of mankind.

Can the Europeans, can the Americans, originating in Europe, look with indifference on this struggle? Can it be indifferent to them whether Turkish dominion continues, and perhaps, aroused by impending danger, rises with new vigour; or whether the Greek nation resuscitates and resumes its place in the number of European states? This cannot be indifferent to them.

There certainly still exists a tolerably active intercourse between most of the trading nations of Europe and the Levant, the productions of the latter meeting a ready exchange for the manufactures of the former; but it is almost superfluous to observe, that the commerce of the countries governed by the Turks is neither what it formerly was, nor what it might be. It is a known fact that these countries do not produce the tenth part of what, with trifling labour, might be obtained from their fertile soil. Where despotism prevails, not only the mind, but also the hands become paralysed and unproductive. And because they produce less than they might produce, these countries consume less than they would consume if inhabited by an active and wealthy population. Besides, such are the obstacles which the Turkish government interposes in the way of friendly intercourse, that nothing short of the hope of great gain, or an enthusiastic love for antiquity, can induce the European to visit Salonica or Constantinople. Whoever travels without the protection of an embassy, is exposed to molestation and robbery, and even personal danger, for he is unprotected by any laws. The merchant travels with ease and security to London or Paris, to Genoa or Vienna, to Leipsic or Hamburg; but who could divest himself of a feeling of apprehension and danger on entering a country where the arbitrary will of the Pasha supplies the place of justice? Law and liberty must be re-established in those countries, before agriculture and trade can flourish, or commercial intercourse revive: then only will they learn to augment their riches, and be desirous of receiving more because they are able to give more.

But it is not merely the prospect of a more active intercourse with the Levant; it is a higher aim, the advancement of civilization, which makes the cause of the Greeks the cause of every European. Every nation has its part in what we call European civilization; its share in the amount of the principles and manners, knowledge and sciences, inventions and arts, spread over Europe; and that civilization has attained its present happy extent, from the acquisitions of each nation individually

* This article was written, as the reader will have already perceived, when the struggle for independence was yet in its infancy, and before the adoption of that system of massacre and extermination which now desolates Greece; but every circumstance of that unexampled catastrophe will be found to justify and confirm the writer's arguments. Since, however, several of the principal towns of the Levant are now destroyed, the European consuls and agents dispersed, and the Greeks themselves massacred, in different parts of Turkey, it is indeed difficult to say what prospect of commercial or political prosperity remains to this ill-fated country, without a speedy and decisive check to the present infernal system. Will the Christian world—will, especially, the members of the Holy Alliance, remain passive spectators of those atrocities which are now practised upon fellow Christians, and which, in a less enlightened age, would have roused all Europe to a spontaneous chastisement of their infidel oppressors?

having been communicated to, and become the common possession of all. The greater the number of nations who mutually interchange their knowledge and their inventions, the more extensive must be the general improvement. For this reason alone must every European desire and promote the restoration of Greece to the rank of a free, independent, and intellectual nation; and feel an ardent wish to see her regain her prerogative of contributing to enlighten the world. She will indeed, for a while, have only to receive and to repair, but let her be once more free, and Grecian legislation and policy, science and art, shall again adorn the globe. The Greeks have continued not only a handsome and vigorous, but also a spirited race of men—restore them to freedom and their spirits will awaken to new life. The operations of nature on the human race continue invariable; it is external causes alone which impede or develop its powers. If the English, the French, or the Germans, were prostrated beneath the Turkish yoke, they would be paralysed as are the spirits of the Greeks. Release the Greeks from their fetters and their servitude, and this spirited, yet docile people, will speedily resume their dignity and their intellectual power.

But even those who cannot view this rescue of an European and once illustrious people from the tyrannical yoke of barbarians, in the important and interesting light which to us it assumes, will surely not be insensible to the policy of the measure; they must readily admit that the re-establishment of a Greek empire would contribute to the protection of Europe against future Asiatic invasion. On the part of the Turks there will certainly, for some time, be no apprehension; the times are gone by when they invaded Hungary, attacked Poland, and besieged Vienna. But no people can be forever on the decline; the lethargy must terminate either in ruin and dissolution, or in revival and regeneration. How, then, if in the decay of the Turkish empire, a young twig were propped? How, if the Wahabites, burning with fanaticism and military ardour, unite themselves to the Turkish empire, and both together, adopting our mode of warfare, become the founders of a new Asiatic and Mahomedan power in the south-east of Europe? Might not danger then ensue? Migration has ever proceeded from east to west; from Asia came the Germans; and in later ages the Hungarians, the Huns, the Moguls, and the Turks. The history of the world is in eternal repetition, though we are unable to calculate time and circumstance. But this is certain and self-evident, that the further eastward the power of European nations is extended, the more securely is Europe herself protected. It is an insufficient argument that our tactics and the superiority of our means protect us; that the Asiatic hordes can effect nothing against the disciplined armies of Europe. Our superiority, however great, is not greater than was that of the Romans over their invaders, yet they were conquered; and it is little better than a truism to assert, that physical power must ever ultimately triumph over art. Neither is it just to argue that the Turks are innocuous, because weak, neighbours.

If it be urged that there is a necessity why the government of the east of Europe should be intrusted to a weak state, it must be recollected that that circumstance is attended with but partial advantage, since it is beneficial to particular states only; the majority have cause to wish for the establishment of a more respectable empire, which, in the event of one half of Europe, at any future period, pressing upon the other, might throw an important weight into the scale.

In short, the foundation of an independent Greek empire in the south-east of our part of the world, must appear to every European desirable, taken in what point of view it may. And a temporary and individual interest can justify no state in refusing what tends to promote the general welfare of Europe; even were it not certain that the prosperity of the whole is that of each. Indeed it is not easy to say which European state could find such an interest in the continuance of the Turkish influence, as to induce it to incur the reproach of its contemporaries and of posterity, for having supported the cause of the Infidel against the Christian; of the Asiatic against the European; of the oppressor against the oppressed. Could Russia be willing to advocate the cause of the Turks against the Greeks—Russia, which reigns over a great part of the people, who at this moment struggle to throw off the

Turkish yoke; Russia, to whom the Greeks have for centuries looked for deliverance? Will Austria ever forget that she is a Christian power, and that the Turks have stood before Vienna? Can it escape England that commerce may be cultivated with the Greek as well as with the Turk? and will liberal-minded Britain employ her gold and her fleets to perpetuate the slavery of an unfortunate people? The European governments may indeed have their reasons for not officially supporting the cause, inasmuch as they would be unwilling to incur the suspicion of entertaining views of self-aggrandisement. But surely none either wishes, or will take part against them; for no cause can be more just than that of a nation which demands back its property, and aspires to emancipate itself from degradation and slavery. The idea of rebellion in such a case is entirely out of the question; for rebellion can be practised only against a legitimate sovereign, not against a foreign and tyrannical usurper. And a people who have no laws to protect them, can surely have none to which they can be considered amenable. For as little as the Germans were bound in eternal obedience to the Emperor of the French, although he had assumed to himself the name of their protector, so little do the Greeks owe obedience to the Turkish Sultan.

The Greeks fight against a foreign nation and its ruler; and therefore the principles upon which the internal laws of a nation fix the mutual rights and duties between prince and people, have no application in their case. The duration of the abuse cannot be urged against them as its sanction, since that is a principle which only operates in private right, and never in the right of nations; and where is the code which fixes the period at which national rights are forfeited? As the Greeks on the day of the occupation of Constantinople by the Turks, had the right to expel the victorious Sultan from their capital, so have they to the present hour that right undiminished.

The Greeks then are not rebels; they have no hereditary, legitimate sovereign; they are in slavery to a foreign master; there is no right recognised between them. Force is their only arbitrator, and to the use of this they have at least an equal claim with their oppressors. Who will deny to the Greeks that right which all nations assert and defend with their fortunes and their lives? Who would prevent them from making their undeniable right respected? Who would be authorized to compel them still to bend their necks under the yoke of a foreign nation? a nation too which has obtruded itself into the system of the European states, and instead of conciliating the conquered, has only humbled, exasperated, and by continued oppression, driven them to despair?

But it is not enough that Europe offers the Greeks no obstruction in their undertaking; if their cause be really her cause, she must also afford them assistance. For the struggle will be more difficult than many seem to believe, and the Greeks will hardly be able to sustain it by themselves. The Turkish empire is indeed disunited in itself and tottering. But who can doubt that the near and common danger will awaken the indifferent from their lethargy; and unite those that are now disunited? The Porte indeed for a century past has not been victorious in any war with a European power. But that which determined the victory in these wars, European tactics, will not decide it in this struggle; for the Greeks are destitute of the same advantage. They will fight as they did before the existence of European tactics, and in such combat, the vigorous and warlike Turk is a match for the Greek, independent of his actual superiority in possessing pecuniary as well as every other requisite for extensive warfare, while the Greeks are destitute of all. A heavy struggle awaits the Greeks, and without the assistance of those on whose assistance we have shown they have every claim, it is to be feared they cannot come off victorious.

But how is this to be done? Shall the European powers send out their armies to make war against the Turks? No: not in this manner are the Greeks to be assisted. It might naturally happen that when one power sent them an auxiliary force, another would suspect plans of aggrandisement, and would consequently be induced to take an opposite part: such assistance might thus be more injurious than beneficial to them. They fight their own

cause, their independence is the stake, and to themselves, therefore, devolves the decision of the contest.

The Greeks cannot expect more, nor need they wish more, than that the European Governments should permit the assistance of their cause by money and voluntary participation of enthusiastic individuals. There is no doubt but many warriors of most of the European armies would joyfully join in the contest, as soon as they were assured of the approbation of their governments, and of the continuance of the enjoyment of their civil and military rights. And where could the desire for action, so much excited during recent events, find a worthier object. The spirit of chivalry is not yet extinct; and the idea of a struggle for the deliverance of a subjugated nation, can yet inspire noble minds with ardour and enthusiasm. Many would gladly share in such a combat, and large sums would every where be collected, did the project but receive public sanction.

It is not iron alone, but gold as well, which decides the fate of war. This, then, is the assistance which the Greeks desire; and its only compensation, gratitude, would be willingly, warmly accorded. Such assistance could excite the jealousy of no European power, and consequently would occasion no counter-operation; and finally, such assistance could be afforded without compulsion, or the risk of involving any nation in a war unrequited by its own interests.

To procure such assistance is the object of this appeal: would it might contribute to excite the public interest in favour of a cause among the most important as well as interesting of the time, however inferior in magnitude; and would that this interest may not remain a merely contemplative one! Would that the Greeks might rise from their political torpor, and with youthful vigour and glorious prospects re-enter the rank of European nations. This is the fervent wish of one who regards the event not only as an European, but as a man and a Christian.

We well know, that among all descriptions of men "whosoever feared God and worketh righteousness, is accepted of him." Every creed is entitled to our respect, and we find in all religions beams of divine light which shine within and over us; but we also know, that Christianity is the most perfect of all religions, and is able, more than any other, to make men act worthy of their origin. How very differently does Jesus Christ, in his serene calmness, in his mild humanity, in his divine sublimity, shine in history, compared with the sword-girt Mahomed, in the obscure gloom of his fanaticism and bloody revenge! How different the spirit of Islamism from that spirit which dwells in Christianity, and has proceeded from it! For this reason, the extension of the Christian church can never be matter of indifference; nor can it be unimportant whether the countries fallen to the share of Mahomedanism remain separated from Christendom, or be re-united to its parent faith. Perhaps the time is not far distant when the cross shall again assert its power in those regions where it was first erected, but where it is now most despised, and when the mosques will be restored to the offices of Christian worship. The triumph of the Greeks would thus be that of Christianity. The Greek church, it is true, is deeply degraded, but with the regeneration of the people it must and will regenerate.

But were not this consideration of what is required of us by Religion alone imperative, the cause of Humanity yet advances its claim, and strongly pleads in favour of Greek emancipation. Can a doubt exist in any mind conversant in history, as to which of the two stands highest,—the Greek or the Turk? and from which most progress in human civilization is to be expected? The whole history of the Turks bears the stamp of rude brutality; it is the history of a band of barbarians, actuated by the worst of passions, and formed for, and fond of, no other pursuit than violence and rapine. Has any one even of their most celebrated Sultans been more than a conqueror and a despot? Can their history point out one that can be compared with Peter I. with Henry IV. with Frederick II. or with Joseph II.? Has any one of their rulers been the sovereign of his people, in the true signification of the word? They have all known how to command, but not one how to govern. Is their legislation and political admini-

stration the work of human wisdom? or have they promoted arts and sciences, and enriched the world with new discoveries? Few nations have so repelled and disdained polite education; few have contributed so little, for they have contributed nothing, to augment the common good of humanity; and history acknowledges no nation but themselves who have migrated into civilized countries, and have lived there for centuries, without either amalgamating with the inhabitants, or appropriating to themselves the benefit of their arts and sciences. The Turk passes in sullen thoughtlessness near the monuments of ancient grandeur, and asks not their origin or their meaning. How different a people, on the contrary, are the Greeks? What histories have they to boast of! to what monuments can they refer! They were the very founders of civilization; and to those who enjoy and appreciate its blessings, the value of the benefit ought not to be more obvious than the gratitude we owe its authors.

Thus have Religion and Humanity advanced their claims: but even this is not all, for Justice itself loudly demands to be heard in favour of the cause of Greece. Can it be forgotten, that that the invasion of the East, under the name of Crusades, by the Western European nations, first brought these barbarians, actuated by feelings of revenge, and desire of retaliation, into Europe, and fixed them where they now remain: fixed them in a country which at that period ranked among the most populous and the most civilized of Europe, but which is now, by the tyranny, the avarice, and the wanton cruelty of their invaders, reduced to a scene of depopulation and ruin. This gives the Greeks a claim on those who originally caused the irruption of their oppressors, which cannot be forgotten, nor ought to be disregarded.

Finally, the Greeks have a powerful demand both on our gratitude and compassion. Though more than two thousand years have elapsed since Greece flourished, the Greeks of the present day are yet descendants of those whose immortal works still delight and form our minds; the descendants of those whose wisdom and science have become the common property of the world. The Romans themselves received their knowledge from them; and what we derive from the Romans, for the most part, originated with the Greeks. It was from the reflection of their brightness that the light was kindled which in the fourteenth and fifteenth centuries, spread over Europe; and down to this very day Plato and Aristotle are our teachers. The friend of antiquity treads with respect the soil rendered sacred by the ruins of their monuments, and can the living monuments of the ancient Greeks, in whose beautiful features their image, at least, if not their spirit, is apparent, be indifferent to us? Does not a nation which has been the first of nations fully deserve our interest?

But even if the Greeks were not the descendants of the immortal sages and heroes of antiquity, they still possess, in their melancholy fate, a claim on our compassion. Many a country has indeed been conquered, and received another master; and foreign nations have migrated into other countries, and subdued their original inhabitants; but in most cases the victors and the vanquished mingled together, time adjusted their conflicting interests, and removed their mutual animosities, and after a few generations they scarcely knew whether they took their origin from the one or the other. Not so here: the Greek still feels as he felt on the day when Constantinople fell; and the bitterest enmity between oppressor and oppressed continues up to the present moment; no approximation, no intermixture has taken place; but the Turk has remained Turk, Mahomedan, and master; and the Greek, European, Christian, and slave.

Thus have they, for four hundred years, been the most wretched of nations; and should their present struggle for liberty be ineffectual, the measure of their misery will indeed be full. Their beautiful country will be deluged with their own blood, and the unhappy survivors of Turkish fury sink into hopeless, endless slavery.

May this misery be averted! May the sun which shall shine upon their liberation soon rise! And may it please the Disposer of all good to grant and confirm to them the greatest of all human blessings,—peace and liberty.

Scientific Discoveries in the Polar Sea.

(Continued from the Journal of Yesterday.)

The interests of science have not been neglected on this voyage; though geographical discovery was the leading object, many new and important observations in meteorology, and some curious facts in natural history, have been recorded. Our notice of these, however, must be brief.

Temperature.—Prepared as our explorers were, for a very low degree of temperature during the winter months, they could not have expected, either from previous facts, or from theory, any thing like that intense cold which they experienced at Melville Island. The register of the thermometer was accurately kept for every two hours; but Captain Parry has given only, at the end of each month, a table showing the maximum, minimum, and mean temperature for every day in that month, and the following abstract at the end of twelve months.

Abstract of the HECLA's Meteorological for Twelve Calendar Months, during which Period she was within the Parallels of 74° and 75° of North Latitude.

MONTHS.	MEAN TEMPERATURE OF AIR IN SHADE.			REMARKS.
	Max.	Min.	Mean.	
1819, Sept.	+37	— 1	+22.54	During the time that we were in Winter Harbour, it was always found that the Thermometer on board stood from 2° to 5° higher than the one on shore, from the warmth created by the fires, &c. The minimum temperature for February was 50° on board, but 55° on the ice. On the ice, 14th and 15th of February, the Thermometer was at 54° for seventeen hours.
Oct.	+17.5	—29	— 3.46	
Nov.	+ 6	—47	—20.60	
Dec.	+ 6	—43	—21.79	
1820, Jan.	— 2	—47	—30.09	The mean annual temperature may be fairly considered as 1° or 2° below zero.
Feb.	—17	—50	—32.19	
Mar.	+ 6	—40	—18.10	
April.	+32	—32	— 8.37	
May.	+47	— 4	+16.66	
June.	+51	+28	+36.24	
July.	+60	+32	+42.41	
Aug.	+45	+22	+32.68	
Annual Temperature			+1.33	

The theory of Mayer, which Leslie has adopted, and on which has been constructed a formula for ascertaining the mean temperature of the globe, has now been found to assign a much less degree of cold to high latitudes than actually exists. It makes, for instance, that of the North Pole 32°, and of the parallel in which Captain Parry passed the winter, 36°: being, therefore, erroneous by fully as many degrees. Doctor Brewster came to a conclusion much nearer the truth. The ingenious Humboldt, in his Memoir on Isothermal Lines, had shown that, in high latitudes, the difference of temperature in the same parallels of the old and new world is very considerable; not less than 13° of Fahrenheit in the parallel of 50°, and that 50°, higher in Europe than in America. He has also shown that the isothermal lines decline under the Eastern meridians of Asia. It had indeed long been known, that during the season of the fishery, the temperature of the Spitzbergen seas in the latitude of 80°, is higher than that of 70° in Baffin's Bay. On these grounds, and from comparing the thermometric curve of 17° in 78° of latitude on the meridian of Spitzbergen with that of 65° on the meridian of Melville Island, Doctor Brewster, in a paper of great interest and ingenuity, observes, 'unless we suppose that the climate of these regions is subject to no law, we are forced to conclude that the pole of the globe is not the coldest point of the Arctic hemisphere, and that there are two points of greatest cold, not many degrees from the pole, and in meridians nearly at right angles to that which passes through the west of Europe.'

The exact position of these poles is not ascertained; but Doctor Brewster thinks they are situated in about 80° N. latitude, and 95° E. and 100° W. longitudes, or the one 5° to the north of Graham Moore's Bay; and the other 1° to the north of the Bay of Taimura, near the North-East Cape. The recent discoveries of the connection between electricity and magnetism, and the meteorological phenomena observed by Captain Parry, had suggested, in other quarters, the probability of the two points of greatest cold being the two magnetic poles: and the same idea occurred to Doctor Brewster, who thinks that, 'imperfect as the analogy is between the isothermal and the magnetic centres, it is yet too important to be passed over without notice.* If, then there be

any truth in the above-mentioned theory, we may conclude that the place where the expedition wintered, is one of the coldest spots on the face of the globe.

The meteorological phenomena and other effects produced by this extraordinary degree of cold, we may briefly enumerate. It may first be observed, that such was the extreme dryness of the atmosphere, that, during the winter months, no snow whatever fell, nor was any thing in the shape of a cloud formed; but whatever little moisture might be in the air, was seen floating about in very minute spicules, assuming various forms of crystallization. It was frequently remarked, that these spicules, on the clearest winter days, came down and remained on the surface of the ground and the ice like very light snow, which, in falling, was scarcely perceptible except when interposed between the eye and a dark object. These spicules were visible in the brightest sunshine, and to their floating about in the atmosphere may unquestionably be ascribed the numerous and beautiful parhelia, halos, paraselenae, prismatic arches, and other meteorological appearances, which Captain Parry has described and illustrated by figures, with minute precision.

When the thermometer sunk to—34°, (below zero) it became painful to touch any thing metallic, and required the utmost caution in handling the sextants, and other instruments, particularly the eye-pieces of the telescopes, which, if suffered to touch the face, occasioned an intense burning pain; and if the instrument, after being used, was brought into the cabin, the vapour condensing around it had the appearance of smoking, and the glasses were instantly covered with a thin coating of ice. But it was never observed that the admission of the external air into the warm cabins condensed the vapour into a snow shower, as has been asserted to be the case in the neighbourhood of Hudson's Bay; though under such circumstances, the vapour was condensed into a visible form like a very thick smoke, which, on setting against the sides and ceiling, became a cake of ice. Even at a much less temperature than that above mentioned, the breath of a person, at a little distance, looked exactly like the smoke of a musket just fired; and Captain Parry states that a party of men employed on the ice appeared as if enveloped in a thick white cloud.

During the low degree of temperature, a very considerable difficulty occurred in the taking of lunar distances, not merely from exposure to cold, but from the circumstance of its being necessary to hold the breath very carefully during the time of making the observation; for if the least vapour was suffered to touch the instrument, it immediately became a coat of ice, which dimmed the glasses and rendered the instrument unserviceable: the cold also cracked the silver on the horizon and index-glasses; and at—26° the mercury of the artificial horizons froze into a solid mass, probably from its impurity, as it ought to have remained liquid as low as—39°.

When the weather was warm, and the thermometer about—24°, or upwards, the smoke from the funnels was observed not to rise, but to skim nearly horizontally, and to continue so for miles even beyond the ships. The same effect, Captain Parry observes, is noticed in a meteorological journal in his possession, kept at Fort York, in Hudson's Bay; but the phenomenon there did not occur till the thermometer was down to—36°. It was also remarked that, during the continuance of intense cold, sounds were distinctly audible at much greater distances than they possibly could be heard in a higher degree of temperature.

The almost total absence of animated beings, during the intense cold, did not allow Captain Parry to ascertain the truth of those extraordinary statements made by Hearne and Ellis, respecting the freezing and reviving of certain cold-blooded animals; and which many have called in question. We entertain, however, no doubt of the fact. An experiment, indeed, was made at the Royal Institution in December last, in freezing a frog to death by plunging it into a mixture of the temperature of 20° below zero, and shortly afterwards reviving it by exposure to a gentle heat; it so far succeeded as to restore the animal to life, but its legs remained paralyzed: another experiment failed altogether; but it must be recollected that the creatures were roused from a state of torpidity, and subjected to excessive cold almost instantaneously, whereas, when in a state of nature, they burrow under the banks of rivers and lakes as the winter approaches, and are gradually frozen. Leeches, we know, may be frozen stiff like pieces of ice, and readily restored; but a leech has no heart. A fact no less curious we are enabled to state on the authority of Captain Buchan of the Navy. In the interior of Newfoundland, he fell in with a frozen lake, the watery surface of which, during the powerful rays of a March sun, appeared one vast sheet of moving matter. In the evening, as soon as frozen over, all was calm and still; but on the following day, when the sun had dissolved the upper surface of the ice, all was again in a state of animation; and on a closer inspection, it was observed that myriads of flies were skimming about, and others embodied in the solid ice, and that these frozen insects, as they became loosened from durance, were re-animated by the rays of the sun. A similar fact is mentioned by Ellis, who says that a large black torpid mass like coal or peat, when placed before the fire, was dissolved into a cloud of living mosquitoes.

* The same idea suggested itself, many years ago, to the late Sir Charles Blagden.

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The Aurora Borealis.—The faint but frequent appearance of this splendid meteor rather disappointed the expectations of our navigators. The coruscations were neither so vivid nor so rapid, nor was the phenomenon attended with such a blaze of light, as those usually seen from about the parallel of 60° to the arctic circle. But their frequency enabled them to make many observations, some of which seemed to be at variance with opinions very generally adopted. It was never attended with the least crackling or rustling noise; it invariably dimmed the lustre of the stars; and instead of *Borealis* it might more properly be named *Aurora Australis*, appearing almost always toward the southern horizon. The observations made by Captain Franklin and his officers on the continent of America confirm those of Captain Parry. At Cumberland House, in lat. about 54° N., as soon as the frost began to break up, the Aurora was visible almost every night, especially in calm weather; but a gale of wind did not appear to disturb it in the least or to affect its motions. He attended particularly while the changes were most vivid and the coruscations most rapid, but could not hear the least noise, yet all the residents assured him they had frequently heard a rustling sound; indeed we are pretty well persuaded, numerous and respectable as the testimonies to this fact may be, that the opinion has arisen from mere association of the idea of sound in connection with rapidity of motion. It is somewhat curious that the same writers, who contend for the noise, assume the place of the Aurora beyond the limits of the atmosphere, some making it 60 or 70, and others 150 miles high,—distances that would render the conveyance of sound utterly impossible, (even if an atmosphere was not wanting,) and wholly incompatible with the celerity of its motions, which will frequently carry a flash from the horizon to the zenith in less than a second of time.

Captain Parry had no doubt of the Aurora being within the limits of the atmosphere, though in that region of it where it is much attenuated; but Captain Franklin and his assistants have placed this point beyond the possibility of question. By several observations of the angular altitude of the luminous arch made at the same moment of time, as marked by chronometers, and by two persons at the distances of 20, 50, and even 60 miles apart, and the Aurora between them, the result invariably gave from 6 to 7 or 8 miles of altitude from the earth's surface. Neither Franklin nor Parry found that the centres of the arches observed any particular rule, or that they were generally in the magnetic meridian, as has been stated; nor were the cylindrical beams always parallel with the direction of the dipping-needle. If any general rule seemed to prevail, it was that of the greatest extent and most permanent light appearing to cross the meridian, or to extend from east to west, and the coruscations to dart from south to north.

Atmospherical Electricity.—If, as there now seems some reason to suppose, the electricity of the atmosphere be communicated by the action of the solar rays, it will not be difficult to account for the nightly sheets of fire that illumine the regions of the torrid zone, the occasional thunder-storms of more temperate climates, and the almost total absence of electrical phenomena within the arctic circle; if we except the Aurora, which plays only in the upper regions of the atmosphere, more faintly, as we have already seen, but not less frequently, as we advance towards the magnetic poles: for the experience of eleven months in the parallel of 75° has proved that in the lower parts of the atmosphere no indication whatever was observed of the existence of electricity. Neither in snow or rain, or fog or wind, whether the sky was clear, or covered with light fleecy clouds, generally tending to the arched form, was the most delicate gold-leaf electrometer affected at the mast head on board ship, or at the summit of a pole 50 feet high on shore; nor was there any other indication of electricity. Either, therefore, it did not exist, or the opposite currents, meeting in this neighbourhood of the magnetic pole, were so nearly balanced as to destroy each other's influence, and reduce their powers to a state of neutrality. Some of the crew fancied that they saw a flash of lightning just as the ships were hauled into Winter Harbour; but, as nothing like thunder or lightning appeared afterwards, during their long residence, it was undoubtedly a mistake. In the summer months, when the clouds became more dense and frequent, and when once, or perhaps twice, a slight shower of rain fell, the gold-leaf electrometer still remained quiescent.

Magnetism.—If we except the geographical discoveries made on this voyage, there is perhaps no observations that may lead to more important results than those made on the dip and variation of the magnetic needle. All the observations hitherto recorded on these two variable states of a suspended needle have been made at considerable distances from the imaginary point named the magnetic pole; but on the late occasion the ships passed this point both in longitude and latitude, and sailed many hundred miles on one parallel of latitude, interposed the whole way between the North Pole of the earth and the magnetic pole. The following results of observations made with great care, and either on shore or on ice, to avoid all extraneous attraction, are extracted from Captain Parry's journal:

Latitude, N.	Longitude, W.	Dip.	Variation.
1. 73° 31' 16"	77° 23' 21"	86° 3' 42"	108° 46' 35" W.
2. 74 25 31	60 4 30		106 58 3
3. 72 45 15	89 41 42	88 26 42	118 23 37
4. 73 12 11	89 2 8		114 16 43
5. 73 33 15	88 18 17	87 35 0	115 37 12
6. 74 39 51	91 47 36		128 58 7
7. 75 9 23	103 44 37	88 25 58	165 50 9 E.
8. 74 58	107 3 31		151 39 3
9. 74 46 56	110 33 59	88 29 .91	126 17 18
10. 75 23 25	112 29 30	88 36 .95	117 52 22

It would appear from this table to be no easy matter to draw curve lines which would intersect each other in any one point; whether on the earth's surface or beneath it,* and consequently the precise position of the magnetic pole cannot be ascertained from these observations; but from the sixth and seventh observations (by which it appears the variation had changed, in the course of 12° of longitude, from 128° 58' 7" West, to 165° 50' 9" East.) Captain Parry may probably not err much in supposing the magnetic meridian to pass through the 100th degree of west longitude in the latitude 74°—75° N. In what degree of latitude the magnetic pole, if it be not a line or area instead of a point, may be situated, does not so clearly appear: a dipping-needle, in fact, is not a very perfect instrument, nor can the observations made by it be entirely depended on; we suspect, therefore, that there must be some error between observation 3 and observation 7, unless, as we have hinted, the source of magnetic attraction, be it what it may, be spread over an extended line or surface, instead of being confined to a point; if the latter, that point may perhaps be supposed to reside about latitude 72° in longitude 100° W.

It has been supposed by some, that as the dip of the needle takes effect at such an immense distance, this magnetic pole must be deep-seated in the earth; and from the progressive regularity of the variation, that it performs a revolution round the pole or axis of the earth in a given time, that is to say in seven or eight hundred years. Such an hypothesis can only be supported on the further supposition of a moveable body within that of the earth, a piece of machinery which, it must be owned, is rather incompatible with the general simplicity of nature; and not the less complicated from the probability of the existence of one at least, if not two other revolving poles, situated in the eastern part of our northern hemisphere. The recent experiments of Mr. Oersted, secretary to the Danish Academy of Sciences, bid fair to throw a new light on the mysterious subject of magnetism. It had long been suspected that a connection existed between magnetism and electricity; but this gentleman's experiments, which have been repeated and extended by the most eminent philosophers of Europe, go very far to prove their identity. We have seen that in the parallels of 74°—75°, no electricity whatever was indicated in the lower strata of the atmosphere, and that the coruscations of the Aurora in the upper regions had not the slightest effect on the magnetic needle: 'it might be supposed,' says Captain Parry, 'that in these regions (Melville Island), where the directive power of the needle had almost entirely ceased, it would be more easily disturbed by any adventitious cause, than in those parts of the globe where the directive energy was greater.' The fact however was not so. At Cumberland House, in lat. 54° N. Captain Franklin observed the magnetic needle to be disturbed, not with that vibratory motion which has been ascribed to it, but by being drawn about a degree out of its usual

* As many important discoveries are in progress with regard to magnetism, and some of Captain Parry's readers, and even of our own, may not understand precisely what is meant by dip and variation we venture to add a few words explanatory of the subject. If a steel bar or needle be suspended so as to move freely on an axis passing through the middle, and be balanced nicely in an horizontal position, and then magnetized, it will retain that position, provided the magnetic virtue be communicated to it somewhere from 10° to 20° south latitude, in or near the meridian of London; but if this needle thus suspended and magnetized be then brought to London; in either case it will no longer remain horizontal, but the north pole will dip or incline to the horizon in an angle of about 71; and if the same needle be carried northwards, towards Baffin's Bay, this angle of the dip or inclination will be found to increase at the rate of about one degree for every degree of latitude, till on arriving at 70°, or a degree or two higher, it will be found to stand, as we may observe by the table, in a perpendicular direction nearly. Again; if a magnetized needle be placed horizontally on a pivot, it will at the present day turn to the westward of the true north, making with our meridian an angle of about 23½; but about three hundred years ago, a needle so placed made no angle with our meridian, but its northern pole pointed directly to the pole of the earth. This declination from the pole, being very different in different parts of the world, is usually called the variation of the needle.

direction when a brilliant Aurora approached the zenith; and it required from five to six hours after the Aurora ceased, to return to its usual direction. The absence in the one case of electric currents, and their existence in the other, (or some particular direction or distribution of these currents in these particular spots,) may, on the principle of their identity with magnetism, serve to reconcile both phenomena. But the experiments said to be made by M. Ampère go to explain much more than this, if it be true that, by a particular position of the connecting wire in the galvanic pile, he has succeeded in giving to a needle, by the passing of electric currents, the direction of both dip and variation; and that these two phenomena are capable of being explained by electrical currents passing in the atmosphere round the earth from east to west. The facts observed by Captain Parry are considered as corroborating the experiments now making on the identity of the magnetic and electric currents; a subject which may in the result prove of great importance to physical science than any discovery since that of the principle of gravitation.

Astronomical Observations.—It would be superfluous to say one word in this place on the utility of observations of the moon's distance from the sun or fixed stars, for ascertaining the longitude. On the present expedition however, the advantages were so peculiar, and the officers availed themselves of them so sedulously that the number taken and the accuracy of the results highly deserve to be recorded: these advantages were, the steadiness of the ships when fixed in the ice; icebergs aground; an observatory on shore; cloudless skies; and the long duration of a circumvolving moon. In the examination of Captain Edward Sabine, taken on oath before the Board of Longitude, it appeared that the longitude of Winter Harbour, by the mean of 6862 lunar observations taken by himself and the other officers, was $110^{\circ} 48' 29''$, and that the rates of five chronometers, determined by a series of lunar observations during three successive months, were found, after another three months to agree within less than three seconds of time, or $35'$ of longitude, when compared with the true time observed at the Calton Hill observatory, on the ships' arrival at Leith.

After this extraordinary degree of accuracy, and in a climate too where the range of Fahrenheit's thermometer was not less than 100° ; and for nine or ten months at a temperature so slow as to create a reasonable doubt whether a chronometer, with every precaution, would not stop altogether, or, if it continued to go, whether the irregularity of its rate would not render it utterly useless, we need not hesitate to say, with the late Sir Joseph Banks, that by the excellence to which chronometers had been brought, 'the longitude was actually discovered, with the limits assigned by the Board of Longitude which entitled to the rewards for its discovery by time-keepers.' Some of them, it is true, occasionally stopped, and the rates of others were irregular, owing probably to the congelment of the oil. Four of Messrs. Parkinson and Frodsham,* it is stated, were better prepared for this peculiar service than any others, not one of them being stopped by the cold; but the severest trials that any timepiece was probably ever subjected to from natural cold were undergone by two pocket chronometers of Arnold, which were used for three or four hours together in taking lunar distances at the low temperature of -20° to -40° , and even as low as -45° (below zero).

Natural History.—From the notices of objects in this department of science, contained in Captain Parry's book, from what we have seen, the specimens brought home are more varied and of a more interesting description than might have been supposed to exist in those dreary regions, in which they were collected. Among the mammalia are the skins of the polar bear, the wolf, the arctic fox, the polar hare, the ermine, lemming, or Hudson's Bay mouse, the Musk-hull, and the rein-deer; of these the first six are perpetual residents, the two last migratory.

Of birds, thirty-two different species were collected, consisting of land and water-birds; among the first were the snowy-owl, the raven, snow-bunting, musquit-hawk, rock-grouse, ptarmigan, plover, sand-piper, &c. The water-fowl consisted of several species of gulls, the wild swan, brent-geese, ducks of four or five different kinds, divers, guillemots and auks.

Of fish, the sea, was uncommonly barren. Six kinds only appear to have been caught, and of each of these not more than two or three

* There is a dispute as to the real maker of these valuable chronometers: Mr. Molynaux, who has long been distinguished for the excellence of his workmanship, having set up a claim, which is denied by Parkinson and Frodsham. As far as we are able to judge from their contradictory statements, we should say the real operator was neither of them, but some third person.

† By an unaccountable delay on the part of some of those to whom the specimens were delivered for the purpose of being scientifically arranged, described, and published in the Appendix, the volume has appeared without any part of the Natural History.

individuals. Of the genus merlangus, or coal-fish, were caught three species; and a small fish brought on board by a party who lost their way on Melville Island, from a lake in the interior which abounded with them, was supposed to be a species of char, and was accordingly named *Salmo Melvillensis*.

Geography.—The knowledge acquired on the late expedition has afforded a sanguine hope for the complete solution of the interesting problem of a north-west passage. Captain Parry has recorded his opinion in favour of its accomplishment, and his suggestion has no doubt been adopted on the present voyage. We have a few words to offer on this part of the subject. By casting an eye over the polar chart, with the recent discoveries laid down upon it, it will be pretty evident that the Polar Sea is an immense circular basin, communicating with the Atlantic and Pacific oceans by channels which divide America from Asia on the one side and America from Europe on the other; and that by tracing the northern coasts of Europe and Asia, (about one half the circle,) we shall perceive that with the single exception of Cevero Vostochnoi or North-east Cape, (of which nothing certain is known,) very small portions of either continent pass beyond the 70th parallel of latitude. Proceeding in the circle round the northern coast of America, and assuming that the two points laid down on the authority of Hearne and Mackenzie, and the key Cape on that of Cook, are correctly placed, (at least sufficiently so for our purpose,) we may conclude that much of that continent does not even reach the 70th parallel. The extent therefore of this polar sea may be considered as about 2400 geographical miles in diameter, or 7200 miles in circumference.

Several islands are known to be scattered over this extensive sea. The largest is undoubtedly that of Old Greenland, a part of which juts into it, but to what extent northerly has not yet been ascertained: the others are Nova Zembla, Spitzbergen, those of New Siberia, or the Land of Liakhov, the North Georgian islands of Parry, and those which form the western land of Baffin's Bay. Besides these are a number of small alluvial islands formed at the mouths of the several rivers of the two continents; but whether there be any more, or of what description, nearer to the North Pole, we must of course remain ignorant till the sea in question has been further explored. If, however, we suppose that clusters of islands continue to be scattered over it on all sides, to the very pole or its vicinity, we shall in that case probably not be far from the fact in concluding the whole of this extensive sea to be shallow, choked up with ice, and unnavigable: but if, on the contrary the islands should terminate to the westward with Melville Island, (and no land was visible in that direction from the highest hill,) and land should not be found, or sparingly found, within ten or twelve degrees of the pole, it would not be unreasonable to presume that in this case the sea would be of great depth, and much less liable to freeze and generally more free from ice than where it is shallower. Captain Parry seems to have no doubt of an open sea to the westward of Melville Island; as whole fields of ice, interminable to the sight, were observed to be moving bodily to the westward for several days together.

There are other circumstances stated by Captain Parry which, we think, rather warrant the conjecture of an open sea at no great distance both to the northward and westward of the North Georgian Islands. We find for instance, that the fields and floes of ice which occupy the middle of Davis's Strait and Baffin's Bay, as well as those which occurred in different parts of Barrow's Strait, and as far west as Melville Island, had all flat and comparatively smooth surfaces, in most parts of which, Captain Parry tells us, a sledge might be driven without much inconvenience; but beyond Melville Island to the westward, where there was no visible land, the ice exhibited a rough irregular surface, covered with what the Spitzbergen whalers call 'hummocks,' appearing like haystacks in a field; and the farther from the land the greater these hummocks evidently were. The same appearance is frequent, we may say constant, towards the northern extremity of Spitzbergen; and it is worthy of remark that the ice assumed this form also towards the south-westerly extremity of Prince Regent's Inlet. Now, as it appears to us that these hummocks could be formed only by an open and agitated sea tossing one mass of ice upon another, and drifting them down by the prevailing northerly winds till wedged in by the peculiar situation of islands, we are inclined to infer from this circumstance, and the probability of a deep ocean to the northward, that whatever ice may occasionally be formed on the surface of such an ocean, it never arrives at any very considerable thickness, but is broken up and dispersed by every gust of wind, and the sea left open and navigable as in all the deep parts of Baffin's Bay, Sir James Lancaster's Sound, and Wellington Channel.

Another circumstance would seem to prove the absence of at least any large and high masses of land to the northward of the North Georgian Islands and of Spitzbergen: namely, the total absence of icebergs in both these seas; masses which can be formed only against the precipitous sides of high land rising abruptly out of a deep ocean, such as is the case on the steep shores of the west side of Baffin's Bay:—here then

we have two positions, which we deem to be indisputable;—hummocks that cannot exist without a neighbouring sea; and icebergs that cannot be formed without high land.

These facts tend to corroborate the very general opinion which, from the time of Dr. Hooke, has been entertained of the probability, at least of the possibility of an open sea at the North Pole. But Dr. Brewster, in his ingenious and highly interesting paper noticed above,* after comparing the results of the expedition under Captain Parry, with those he had drawn from a previous theory, is of opinion that 'the hopes which have been so reasonably entertained of reaching the Pole itself, are thereby encouraged; his conclusion being that 'the mean temperature of the pole of the globe will be about 11°, incomparably warmer than the regions in which Captain Parry spent the winter.' 'If the pole,' he adds, 'is placed in an open sea, the difficulty of reaching it entirely ceases; and if it forms part of a frozen continent, those intrepid individuals, who sustained the rigorous cold of Lancaster Sound, would experience no hardship under a comparatively milder climate.'

In this opinion, which is certainly that of all the Greenland fishermen, from the earliest periods to the present time, we entirely concur; and we are not therefore surprised, that when the ships on the late expedition opened out Wellington Channel, at the western extremity of Barrow's Strait, free from every particle of ice, as far as the eye could reach, on a remarkably clear day, there were not wanting those who felt an anxious desire to try for a passage in that direction, which, if found, would not, in point of distance, have exceeded that of a direct westerly course. Captain Parry says—

'Wellington channel, to the northward of us, was as open and navigable, to the utmost extent of our view, as any part of the Atlantic; but as it lay at right angles to our course, and there was still an opening at least ten leagues wide to the southward of Cornwallis Island, I could fortunately have no hesitation in deciding which of the two it was our business to pursue. If, however, the sea to the westward, which was our direct course, had been obstructed by ice, and the wind had been favourable, such was the tempting appearance of Wellington channel, in which there was no visible impediment, that I should probably have been induced to run through it, as a degree more or less to the northward made little or no difference in the distance we had to run to Icy Cape. The open channel to the westward did not, however, reduce me to this dilemma.'

Desirable therefore, as it may hereafter be, to look at the state of the Polar Sea, beyond Wellington Channel, we conclude it will hardly be thought advisable for the expedition now pending to attempt it in the first instance. Neither do we think that the strenuous, but unsuccessful endeavours, of the late expedition, in two different seasons, to penetrate to the westward beyond the southwest end of Melville Island, afford any hope that the passage will ever be effected in that particular parallel of latitude. It can scarcely be doubted then, that the attempt is now about to be made, as recommended by Captain Parry, in a more southern latitude, and close along the northern coast of America, where they may reasonably hope to meet with a better summer climate, and a longer season for their operations, by at least six weeks.

There is another reason for trying a coast navigation; Captain Parry found by experience, that the navigation among the ice of the Arctic seas could only be performed with any degree of certainty, where there was a continuity of land. This being the case, a manifest advantage will be gained, in making the attempt along the northern coast of America, as he will there be certain of a continuity of land. Aware as we are, that climate depends not solely on degrees of latitude, but is modified by circumstances of locality, unconnected with geographical position, yet it can hardly be doubted, that many advantages will be found in the parallel of 69° or 70°, which did not exist in that of 75°. Among others may be mentioned, in addition to the increased length of summer and abridgment of winter, the great probability, we might say certainty, of obtaining fuel, provisions, and antiscorbutic plants; the frequent communications with natives, and the chance of sending home information of their proceedings; together with the comparative facility with which the officers and men may be preserved, in the event of any irreparable accident happening to the ships: these are undoubtedly important considerations, which strongly recommend the trial of this route.

* On the Mean Temperature of the Globe.

† By information, which Captain Franklin has received from the Red-knife Indians, who are to accompany him from Bear Lake to the sea coast, with which they are well acquainted, fir-trees of considerable size border the banks of all the rivers within a day's journey of the sea; and plenty of brushwood fit for fuel grows on most of the low islands off the coast. We know from Allison, who wintered round the North Cape, in lat. 71° 1', that fir, birch, and willows, grew there to the size of a man's thigh.

But then comes the question to be solved, as to the best and shortest route to get upon the coast of America? From the appearance and circumstances at the southern part of Prince Regent's Inlet, there was not a man in the late expedition, who was not convinced that it opened out into the sea which washes the northern coast of this continent. The only objection to this route, is the delay which would necessarily be occasioned by proceeding so far to the northward as Sir James Lancaster's Sound, in order to get into the Regent's Inlet. It is probable however, that either Hudson's Strait, Cumberland Strait, Sir Thomas Roe's Welcome, or Repulse Bay, or all of them, may afford navigable passages into the Polar Sea, and particularly the Welcome, down which, according to the testimony of all the navigators who have entered it, flows a tide of considerable velocity, being, as Captain Parry supposes, part of that flood setting easterly along the coast of America, of which the other part takes a northerly direction, as he found it, up Prince Regent's Inlet.

It must, however, be admitted that, probable as this may appear, our knowledge is not sufficiently accurate to justify more than a strong ground of hope that a passage will be found in some of all of these directions; should this hope on examination prove fallacious, the time spent in the examination may be supposed to bring the season so nearly to a close, as to limit the progress of the first year's exertions, by the old route of Sir James Lancaster's Sound, to some of the harbours of Prince Regent's Inlet: at the same time it is to be remarked, that a passage through Hudson's Strait and the upper part of the bay is practicable a month or six weeks earlier than it appears to be across the central barrier of ice in Davis's Strait or Baffin's Bay.

Arrived on the coast of America, and no obstruction from land occurring, we see no reason why the passage to Icy Cape, which does not exceed 1500 miles, might not easily be accomplished in one season; about 600 of these were actually run on the last voyage, in six days. Supposing the theory of Dr. Brewster to be correct, which assigns the greatest degree of cold to the magnetic meridian, the most serious obstruction from ice will probably occur from 90° to 100° of W. longitude; or (setting aside that theory) about midway of the coast, as being the most distant point from the two oceans; it being well known from experience that the proximity of a permanently open sea is a circumstance which, of all others, in high latitudes, tends the most to temper the severity of the climate. On either ground, therefore, it can scarcely be doubted that the climate will be found to improve, and the obstruction to become less, as the ships advance towards the Pacific. Besides it is well known that the westerly coast of every continent and large island (even of our own) enjoys a higher temperature by many degrees than the eastern coast in the same parallels of latitude. On the west coast of America, in 60° N. the climate is infinitely milder than in Newfoundland in 45° N.; and while in the frozen regions of Hudson's Bay, under the parallels of 60°, the ice and snow scarcely ever disappear, navigators have found, under the same degree of latitude on the west coast of America, delightful climate and a well clothed country. Between 60° and 61° of latitude, Captain Cook found that most delicate of all birds, the hummingbird; and just at the same spot, the companions of the ill-used Malaspina (whose voyage is still withheld from the public) give a glowing description of the country and climate.

We take for granted, what scarcely admits of a doubt, that the action of the sun's rays, so much more powerful, and radiated from so much more land along the continuous coast of America, than along the passage discovered by Parry, will produce the same effect of opening a clear channel of water between the coast and the fields of ice. We find this fact indeed asserted by a gentleman belonging to the North West Company, who has resided many years upon the Mackenzie River; and it is known to be so along the shores of the islands of Nova Zembla, Spitzbergen, Old Greenland, and on every shore approached by the two last expeditions; and it is not therefore to be doubted that the same effect to a greater extent, will be found to take place in the low latitude of the northern shores of North America.

It is unreasonable then to hope that no very serious obstruction may occur on the coast of America; but there are those who question the existence of a passage through Behring's Strait. We often hear of Cook's having met with an impenetrable barrier of ice. Cook, however, met with no such thing: his experience had taught him that the position of the ice varied from year to year, and many times in the course of the same year; but so far from ascertaining or thinking the ice of Behring's Strait impenetrable, he returned, without trying its penetrability, late in the season, to the Sandwich Islands to refit his ships, and lay in provisions for a new attempt in the following summer. Cook was too sensible not to know that the accomplishment of a passage at that advanced season of the year was hopeless; and too prudent to persevere, in the beginning of September, for no other purpose but to be caught in the ice and compelled to winter on the coast of America; an event for which he was wholly unprovided. Of the feeble attempts of his successors we shall say nothing; they candidly avow that, after an absence of three years from England, they considered the most certain,

though the longest, passage home, to be the best. All we know of the impenetrable ice is that Cook had passed beyond Icy Cape before he fell in with any; that Kotzebue, in August, saw none on the western shore of Behring's Strait as far as the eye could reach from the entrance of the inlet in lat. 68° N.; and we have recently learned that a Mr. Grimes went in 1819, in a small brig, to trade for furs in Kotzebue's Inlet; that he passed the strait on the 18th of July, and remained in the neighbourhood a whole month, during which time the sea was perfectly free from ice. We shall speedily know more of this, as Captain Ricord, of the Russian navy, (the same who rescued Golownia from the hands of the Japanese,) hired Grimes's vessel, and proceeded in her last summer to explore the seas to the northward of the strait,—which our accounts from Petersburg state he actually passed (with the two Russian frigates sent on discovery) in July, 1820, and that no intelligence of their return had reached the capital in the middle of March last.

A notion has been propagated, we know not on what precise ground, that Behring's Strait is closed to the northward by some land, supposed to connect the two continents of Asia and America, like the bridge of a pair of spectacles. The only reason that we can find assigned for this unnatural connection, is the circumstance of herds of deer being observed to migrate to this supposed connecting strip of land, and to return at stated periods: such a circumstance we now know would prove nothing, since deer migrate from America to Melville Island, which is upwards of 300 miles from that continent. Of Captain Burney's attempt to set aside the validity of Deshneff's voyage from the Kovyma to the Anadyr, by closing the strait in the same manner, we have already given our opinion; but on this point too we have been favoured with some information from our intelligent correspondent at Petersburg. From him we learn that, in the winter of 1819-20, a party of Tchutsky, under the command of a Russian sailor, set out from the north-east point of Asia (at the extremity of Behring's Strait) on sledges drawn by dogs, and with rein-deer for food, directing their course by a compass to the north. They travelled the first two days over ice whose surface was pretty smooth, but on the third day it became so rugged, or, as the Greenland fishermen say, so 'hummocky,' that with difficulty they were able to make any progress. Alarmed at this unusual appearance, and more so at a tremendous noise, resembling claps of thunder, (occasioned, as the Tchutsky well knew, by the breaking up of the ice,) which became more loud and frequent as they advanced north-erly, and being at the same time enveloped in a thick fog which prevented them from seeing the danger that threatened them, the party on the fourth day positively refused to advance a step farther, lest they should all perish in the ocean. By the relation of this journey sent to Count Romanzoff, at whose expense it was undertaken, it appears that the distance travelled, as calculated by the Tchutsky, was 200 wersts. This bay then of Captain Burney, in which Behring's Strait is supposed to terminate, must not only be not a very deep but an unusually shallow one, supposing land to have existed at the spot where the Tchutsky stopped. The result of this expedition was not, however, satisfactory to Count Romanzoff, who authorized Captain Ricord, as already mentioned, to hire Grimes's schooner and explore the strait to the northward.

Connected with this subject, we may take occasion to mention one of the most daring enterprises of a single individual since that of Ledyard, whose activity and intrepidity he appears to have imbibed. Captain Dundas Cochrane, a commander in the navy, after perambulating every province of Spain and Portugal and a great part of France, volunteered to prepare himself as a Mahomedan for a journey from the source to the termination of the Niger, but on stipulations that could not be complied with. He therefore travelled on foot to St. Petersburg and was introduced to the Emperor, to whom he proposed a journey on foot across Siberia, following the northern land which he supposed to be joined to America, or, finding that not to be the case, to procure a passage across Behring's Strait, enter Kotzebue's Inlet, and prosecute his journey on foot along the northern coast of America to one of the establishments of the Hudson's Bay Company. The Emperor readily acceded to his project, and he set off with passports and an order from the Minister of the Interior to all to whom he might apply to afford him every possible assistance. In September last, information was received at Petersburg of his having reached the Altai mountains on the confines of Chinese Tartary; and that from Irkutsk he was bending his way to the northward to avoid interruption from the Chinese, and with the view of reaching Kamakatska as the most likely place to procure a conveyance across Behring's Strait. Coupling, therefore, this extraordinary expedition with one sent officially by the Russian government, under the orders of Lieutenant Baron Wrangel, to ascertain with certainty the existence and precise position of the North-East Cape of Asia,—the land expedition of Lieutenant, now Captain, Franklin, in America, and that of Captain Parry, we cannot but indulge a hope that, in no great lapse of time, the geography of the northern regions of Asia and America will be accurately determined.

The chances of a failure must inseparably be annexed to all enterprises of the nature of that on which Captain Parry is employed, and in proportion as the expectations of the public have been raised by the re-

sult of his last voyage, would such a failure be felt; indeed we have no doubt that any thing short of reaching the Pacific would now be considered as a failure, and cause disappointment, even if it should be discovered that no communication exists between the Atlantic and Pacific. One thing, however, we will fearlessly assert, that if a passage is to be effected by human means, Captain Parry is the officer most likely to accomplish it. Should he fail, we sincerely believe that it will be useless hereafter for any other to attempt it; and we are quite sure, that, whether he succeeds or not, his exertions will be honourable to himself and satisfactory to his employers.

This is a conclusion which, we think, we are fairly warranted to draw from the work before us. No one, we are persuaded, can rise from its perusal without being impressed with the fullest conviction, that his merits as an officer and scientific navigator are of the highest order; that his talents are not confined to his professional duties; but that the resources of his mind are equal to the most arduous situations, and fertile in expedients under every circumstance however difficult, dangerous, or unexpected. We are proud, and justly proud, of the name of Cook; but we venture to assert, without fear of contradiction, and without meaning to derogate one tittle from the merits of that renowned navigator, that in no part of his career of discovery had he occasion to call into action all those personal exertions and mental energies, which were perpetually demanded in, and essential to the safety of, the late expedition.

In the southern Atlantic, Captain Cook entered the loose and floating ice on the 12th Dec. in lat. 62° 10'; met with icebergs on the 21st, in lat 67°; and, by the end of the same month, had returned to lat 58°. On the 26th January he was again within the antarctic circle; and on the 30th had reached lat. 71° 10', whence he returned to the northward the same day, deeming it (as he says) 'a dangerous and rash enterprise' to struggle with icebergs and fields of ice. 'I, (he continues,) who had ambition not only to go farther than any one had been before, but as far as it was possible for man to go, was not sorry at meeting with this interruption.' Captain Cook was perfectly right; for as his object was the search of a continent, and not of a navigable passage, though it was the middle of summer, with constant daylight, mostly clear weather, and the thermometer always above the freezing point, yet it would have been an unnecessary sacrifice to pursue that search any farther; he therefore immediately fell back on the abundant resources of the Marquesas and Otaheite islands. Thus, too, in the northern hemisphere, after an unsuccessful attempt of twelve days in or near the ice, and after reaching lat. 70° 41' N. he returned, on the 29th August, to the Sandwich islands, to recruit his people with the refreshments supplied by them in profusion, not deeming it, (he says) at so advanced a period of the season, 'consistent with prudence to make any further attempts to find a passage into the Atlantic this year.'

But how stands the case with regard to Captain Parry? After working his way, and struggling almost without intermission for three months, through such fields and floes of ice as were never before encountered by ships with impunity, he was frozen up for ten months in the high latitude of 75°, during three of which the sun never shed one cheerful ray, and the thermometer was generally from 40° to 50° below zero; deprived of all refreshments but what the ships themselves afforded; and without any vegetable substances but the little which he contrived to produce in his cabin, at the time even of the lowest temperature;—under such circumstances it required no small share of mental energy to preserve the health and spirits of the people entrusted to his care, and to prevent a state of despondency so conducive to that most dreadful of all maladies, the sea-scurvy: and his efforts were crowned with such success, that he was enabled to bring home every man (with the exception of one who carried out with him an incurable disease) in as high health as when they left England, and the two ships as perfect nearly as on the day in which they left the docks.

It is due to the officers to remark, that the example set by their excellent commander was most cheerfully followed by all; and to the men, that their conduct throughout the trying situation in which they were placed, was most exemplary. On Lieutenants Liddon, Beechey and Hoppner, Captain Parry bestows the most flattering applause. The labours of Captain Sabine of the Royal Artillery speak for themselves; and the Appendix, in which they are arranged, will long be resorted to by men of science, as a most valuable detail of facts and well-digested observations, collected and made in a part of the globe where, in all human probability, it may never again fall to the lot of man to repeat them, or to make others.

These facts and observations, accompanied by the clear and distinct statement of the various circumstances by which they were affected, are worthy of the narrative of the voyage by which they are preceded; and we do not hesitate to say that, taken together, they compose a volume which may proudly maintain its station on the same shelf with those of Cook and Vancouver, the first in rank, as in value, of voyages undertaken for the improvement and extension of nautical and geographical knowledge, in our own or in any other language.

ASIATIC DEPARTMENT.

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Lieutenant Colonel Weguelin.

Few perhaps have left this country for their native land after a life of more anxious and undeviating assiduity in the discharge of their public duties, and whose claims to the gratitude of their employers have been less generally known, than the subject of this brief notice.

Lieutenant Colonel WEGUELIN, our late Commissary General, embarked a few days ago on board the ship WILLIAM MILES for England. He quitted that country in the latter end of 1781, and his services since that period have been many and meritorious. For the space of fifteen years he was constantly employed in the Frontier Provinces, or elsewhere in the subaltern duties of the Army, and during the years 1790, 91 and 92, was present, on the Coast, with Colonel COCKERELL's Detachment in the war against TIPPOO. He was engaged in the battle of the 15th of May, 1791, and at the assault of the Enemy's entrenched camp and lines before Seringapatam. He accompanied the centre column under the Marquis CORNWALLIS's personal command, and commanded a Company with troops stationed in Sibbald's Redoubt, which for a whole night and the succeeding day repulsed the repeated attacks of the enemy's principal force.

After a long period of varied service and employment he was subsequently present at Bhurtpore, and for some years ably filled the situation of Deputy Judge Advocate General in the Field. On promotion to a regimental Majority, he was called to the difficult command of an Expedition for the occupation of Macao, under circumstances of an unprecedented nature, when it was deemed necessary to occupy that island for its eventual defence against an anticipated attack from the French. He was then honored with the local rank of Colonel, and the temper, forbearance, and firmness, exhibited by Colonel WEGUELIN under an unusual series of difficulties to which the jealousy of the Chinese Government exposed the troops of the Expedition, were on his return distinguished by the particular approbation of the Supreme Government in Public Orders, and in Letters from the Military Secretary, and Adjutant General of the Army.

In 1810 Colonel WEGUELIN was appointed Deputy Commissary General; and in that capacity proceeded with the Expedition to the Isle of France, in charge of the Army Commissariat. His exertions in this service also received the acknowledgements of Government. Shortly after his return to Bengal, (in 1812) he was called to the responsible situation of Commissary General. While thus employed, although the original and more momentous features of the Commissariat Department were not modelled under his first guidance or superintendence—yet his abilities as an Accountant, and his ready power of methodizing the general system of duties and accounts, either in the wider scale of their extended operation, or in their minute and more intricate details, have been the object of admiration to all who have had the opportunity of immediately witnessing and appreciating them. The general results are known to all, but the anxious, patient, and unwearied application of Colonel WEGUELIN to his duties,—his ceaseless and unobtrusive devotion to this one unchanging object for the last sixteen years, under public trusts, and difficulties of no common magnitude and importance, will long live in the admiring recollection of those who have known him;—and, that these high qualifications have not been otherwise unmarked, will be seen by the following Extract from a Public Letter from the Military Secretary to Government, to his address, while on the eve of Departure for his native country,

Extract of a Letter to Lieut. Col. T. M. Weguelin, late Commissary General, from the Secretary to Government in the Military Department.

"Your zealous and indefatigable services in the Commissariat, from its first establishment until the present time, the last Eight years and a half at the head of the Department, embracing a series of Military operations on a scale of magnitude not before that period witnessed in India, have been equally creditable to yourself and beneficial to the public interests.

"His Lordship in Council considers it but an act of justice to record the expression of this sentiment, and to add that the attention and careful fidelity with which you have unceasingly endeavoured to promote the efficiency of the department entrusted to your charge, and to economise the public funds of the State; under circumstances which demanded unremitting regularity and exertions in the important duties of your office, entitled you to the acknowledgements of Government.

"The closing of your accounts will necessarily be brought before the Honourable the Court of Directors, when the Governor General in Council will derive considerable gratification in offering to the notice of the Court, the name of an Officer, who, whether in his Regiment or on the General Staff of the Army, has invariably merited the approbation of his superiors."—*Government Gazette.*

Late Major Roughsedge.

Died at Soanpore, sixty miles south of Sumbhulpore, on the 13th of January, of a fever which had harassed him above three months, Major EDWARD ROUGHSEDGE, of the 26th Regiment N. I. late Commanding the Ramghur Battalion, and Agent to the Governor General. Few men will be more generally or more justly regretted than this distinguished Officer, of whom it may be said with entire justice, that he was an ornament alike of the service to which he belonged, and of private society. In public life, his undeviating rectitude of conduct secured to him the approbation of Government, and the confidence and love of all in any way placed under his controul. Raised when a very young man to the command of an important corps, and placed in a very responsible and confidential situation, frequently calling for the exercise of extensive civil as well as military powers, he invariably conducted himself with wisdom, probity, and humanity. In a long course of years, and amidst various clashing interests and open and concealed enmities, he managed the affairs of the numerous small principalities on the South West frontier with approved integrity and judgment; and in the settlement of all their disputes, whether arising amongst themselves, or with the Government, evinced a sound discretion, great personal purity, and the most even-handed justice. His affability with the natives both high and low, his thorough knowledge of their customs and language, his undeviating kindness of feeling and attention to their prejudices, wishes, and interests, had gained him such an ascendancy over them, that his name was a password for every thing just and honorable; and his order ranged undisputed over a tract of country extending several hundred miles, and comprising many different tribes and classes of men. In 1813, when our provinces were threatened with an invasion by the Pindarees, he was entrusted with the important post of defending the frontier between the Soane and Cuttack; and about three years ago the unlimited confidence which Government had long reposed in him was crowned, and the importance of his situation enhanced, by his nomination as Political Agent: an appointment the duties of which he had in fact long virtually exercised.—As a soldier, Major Roughsedge had frequent opportunities of shewing that he combined all the principal virtues of Military life,—daring courage, intrepidity, utter carelessness of self, kind consideration for his officers and men, protection of his friends, and clemency to his enemies. He successively subdued various refractory chiefs without cruelty or oppression; and on every occasion shewed the utmost desire to avoid hostilities, and spare blood.

In private life, Major Roughsedge was not less estimable. His unsparing hospitality has been experienced, at one time or other, by half of his brother Officers, and was indeed proverbial throughout India. To the Officers of his corps he so demeaned himself, that he was held by them in the light of an elder brother, rather than of a master or superior. He possessed great sweetness of disposition and amiability of temper; so that those who lived with him for years never saw him angry or even ruffled—such was his amenity. His benevolence and munificence might be termed princely; and yet so little conscious was he of their value, that he felt surprise, and even displeasure, if any covert act of his kindness were accidentally mentioned before him.—In conversation he was unassuming, amusing and instructive. He had carefully cultivated a naturally very superior understanding by extensive reading, and was full, on almost every subject, of information. In argument he was clear, acute, and convincing; and his repartees were lively and pointed, without being personal or ill-natured. So much indeed of the true milk of human kindness was mixed up with his nature, that the writer of these hasty lines, who had the happiness of knowing him well, firmly believes he scarce ever remembered an injury a few days after it had been committed, and never cherished enmity against a living being.—That such a man should be untimely cut off from his family, friends, and country, whilst in possession of station, fortune, high reputation—all that renders life valuable—is most afflicting; and to his friends would be scarce endurable, if the sad uncertainty of human prospects and enjoyments did not daily teach them the bitter lesson of resignation.—*Government Gazette.*

General Dalzel.—A report has reached Calcutta that General DALZEL has been appointed to fill up the vacancy on the General Staff of Bengal, and General PRITZLER on the Staff of Madras.

Furlough for Civil Servants.—We have been informed that it is the intention of the principal Civil Servants residing at the Presidency to propose an address to Government, soliciting the GOVERNOR GENERAL in Council to move the Honourable Court of Directors to establish a Furlough for the benefit of their Civil Servants on this establishment, and we have been requested to state for the information of such gentlemen belonging to that Service as may not have seen the Paper which has been circulated on the subject, that a General Meeting will be held to consider the matter at the Town Hall on Monday the 28th instant at Eleven o'clock in the morning.

Caution to Ladies.—A Correspondent has communicated to us the following Caution to Ladies visiting the Park at Barrackpore.

"On Sunday se'ennight a party of Ladies and Gentlemen from Serampore crossed the water to visit the Park, when their attention was arrested by the sight of the Buildings, inhabited by the Wild Beasts, &c. On arriving near them, one of the party, an elderly Lady, whom curiosity had excited to inspect the Beasts more minutely, very incautiously applied her head too close to the bars of the den inhabited by three hungry Leopards, one of which made a sudden spring at her, and pulled her Bonnet from her head, bearing away the prize triumphantly into a corner, to the great astonishment of the surrounding spectators. The Bonnet was strongly contested for by the three Leopards, and each had a share of the prey."—*Government Gazette.*

Government Orders.

MILITARY.

General Orders, by His Excellency the Most Noble the Governor General in Council.

FORT WILLIAM, JANUARY 16, 1822.

The Governor General in Council is pleased to make the following Appointment:

Assistant Surgeon J. M. M. Todd to perform the Medical duties of the Civil station of Balasore.

FORT WILLIAM, JANUARY 19, 1822.

The Governor General in Council is pleased to make the following Promotions and Alterations of Rank.

7th Regiment Native Infantry.—Senior Ensign George Harris Edwards to be Lieutenant, from the 11th January 1822, in succession to Oudecott, who has resigned the Service.

27th Regiment Native Infantry.—Senior Ensign James Dundas Douglas Brown to be Lieutenant, vice Homer retired, with rank from the 10th December 1821, in succession to Donnelly deceased.

Medical Department.—Senior Assistant Surgeon Andrew to be Surgeon, vice G. Campbell retired, with rank from the 10th June 1821, in succession to Impey deceased.

Alteration of Rank.—27th Regiment Native Infantry.—Lieutenant Henry Rochie Osborn to rank from the 1st January 1821, vice Homer retired.

Medical Department.—Surgeon Gilbert Ogilvie Gardner to rank from the 19th June 1820, vice G. Campbell retired.

Surgeon James Atkinson to rank from the 17th December 1820, vice Robinson appointed Superintending Surgeon.

Surgeon Jehosaphat Castell to rank from the 22d March 1821, vice Assey deceased.

The following Appointments are made by His Lordship in Council: Lieutenant William Cunningham, of the 27th Regiment Native Infantry, to be Garrison store keeper of Fort William.

Lieutenant A. Carnegie, of the 11th Regiment Native Infantry, to be a sub-Assistant in the Honorable Company's Stad Institution, vice Wallis deceased.

The undermentioned Gentlemen Cadets of Artillery and Infantry, and Assistant Surgeon, are admitted to the service on this Establishment, in conformity with their appointment by the Honorable the Court of Directors.—The Cadets are promoted to the rank of 2d-Lieutenant and Ensign, leaving the dates of their Commissions for future adjustment.

Artillery.—Mr. Edward Henry Ludlow, date of arrival in Fort William 16th January 1822.—Mr. John Raithby Revell, ditto ditto.

Infantry.—Mr. Alexander Webster, date of arrival in Fort William 14th January 1822.

Medical Department.—Mr. Adam Macdonnell, date of arrival in Fort William 16th January 1822.

Lieutenant Robert Samuel Phillips, of the 26th Regiment Native Infantry, and Assistant Surgeon James Grierson, have returned to their duty on this Establishment, by permission of the Honorable the Court of Directors, without prejudice to their rank; date of arrival in Fort William 16th January 1822.

The undermentioned Officers have been permitted to proceed to Europe on Furlough on account of their private affairs.

Superintending Surgeon John Hamilton.—Lieutenant Chas. Sidney, of the 7th Regiment Light Cavalry.

Lieutenant Henry Brown, of the 26th Regiment Native Infantry, having forwarded a Medical Certificate from Persia, is permitted to proceed to Europe on Furlough for the recovery of his health. The Furlough granted to Lieutenant Brown, is with reference to the Regulations published in General Orders of the 15th September last, to commence from the 8th February 1821, the period of Sailing from Bombay, of the Ship Pigeon, on which that Officer was permitted to embark for Kishme by the Bombay Government.

Lieutenant Henry Carter, of the 7th Regiment Native Infantry, Barrack Master of the 8th or Rohileund Division, is permitted to proceed to the Cape of Good Hope, for the recovery of his health, and to be absent on that account from Bengal for a period of Twelve Months.

The permission granted in General Orders of the 27th October last to Lieutenant G. F. Agar, of the 25th Regiment Native Infantry, to proceed to Europe on Furlough on account of his private affairs is cancelled at the request of that Officer.

2d Lieutenant C. Dallas, of the Regiment of Artillery, is permitted to proceed to Madras on urgent private affairs, and to be absent on that account from Bengal for a period of Six Months, from the 1st Proximo.

The arrangement made by Brigadier Vanrenea, Commanding in Rohileund, in District Orders, dated the 1st January 1822, directing Brevet-Captain Blackall, of the Barrelly Provincial Battalion, to officiate as Barrack Master of the 8th or Rohileund Division, on the departure, for Mhow, of Brigade-Major George Casement, removed in General Orders of the 9th November last, from the Barrack Department, is confirmed by Government as a temporary measure.

The leave of absence granted in General Orders of the 28th November last, to Lieutenant John Mackenzie, of the 3d Regiment Light Cavalry, Sub-Assistant Superintendent of the Honorable Company's Stud, to be absent from his Station, is cancelled at the request of that Officer.

His Lordship in Council was pleased in the Political Department, under date the 11th instant, to nominate Captain James Fergusson, of the 23d Regiment Native Infantry, to Command the Escort attached to the Resident in Malwah and Rajpootana. This appointment to have effect from the 11th November last.

The Governor General in Council is pleased to make the following Appointments to supply the vacancies in the Medical Department of the Army, which will be occasioned by the approaching departure, for Europe, of Superintending Surgeon J. Hamilton and Rt. Lowe.

Deputy Superintending Surgeon C. Robinson to be a Superintending Surgeon, vice Hamilton proceeding to Europe; the appointment to have effect from the dispatch of the Ship Fame, on which Mr. Hamilton has taken his passage.

Surgeon Samuel Darham to be a Superintending Surgeon, vice Lowe proceeding to Europe; the appointment to have effect from the dispatch of the ship on which Mr. Lowe may take his passage.

Surgeon James McDowell to be Deputy Superintending Surgeon, vice Robinson promoted.

W. CASEMENT, Lieut.-Col. Sec. to Govt. Mil. Dept.

General Orders, by the Commander in Chief, Head-Quarters, Calcutta, January 16, 1822.

The appointment by Lieutenant-Colonel Cock, Commanding the 1st Battalion 12th Regiment Native Infantry, in Battalion Orders of the 13th ultimo of Lieutenant Bell to officiate as Interpreter and Quarter Master to the Battalion during the absence of Lieutenant and Interpreter and Quarter Master Sleeman on special duty, is confirmed as a temporary arrangement.

Surgeon King of the 27th Regiment Native Infantry, doing duty with the 2d Battalion of Artillery at Dum-Dum, is directed to proceed towards Balasore by the route of Midnapore, and join the 2d Battalion of his Regiment (to which he is attached) in progress from Cuttack to Allahabad, the destination assigned to the Corps by the Relief.

The leave of absence granted in General Orders of the 12th November last to Ensign R. Somerville, 2d Battalion 21st Regiment Native Infantry, is commuted, at that Officer's request, to leave to rejoin his Corps, and the term of absence extended to the 10th April 1822.

The undermentioned Officers have leave of absence.

1st Battalion 2d Regiment.—Lieutenant A. Spens, from 1st January, to 1st July, to visit the Presidency, on Medical Certificate.

2d Battalion 13th Regiment.—Lieutenant Interpreter and Quarter Master Forster, from 29th December 1821, to 1st March, in extension, to rejoin his Corps.

Head-quarters, Calcutta, January 14, 1822.

Lieutenant G. A. Currie, of the 26th Native Infantry, is posted to the 1st Battalion of the Regiment.

Assistant Surgeon H. Guthrie is removed from the 8th to the 6th Regiment Light Cavalry, and directed to proceed and join the latter Corps at Mhow, on being relieved from his present charge.

Assistant Surgeon James Barker, whose admission to the Service is notified in Government General Orders of the 11th instant, is posted to the 8th Light Cavalry, and directed to join.

The undermentioned Officer has leave of absence:

European Regiment.—Assistant Surgeon W. Duff, from 5th February to 5th April, in extension, to rejoin his Corps.

Head-quarters, Calcutta, January 15, 1822.

Ensign J. O. Oldham, of the 1st Battalion 2d Regiment Native Infantry, is directed to join and do duty with 2d Battalion 15th Regiment Native Infantry, at Bareilly, until further orders.

Friday, January 25, 1822.

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The following Removals are to take place in the Regiment of Artillery:

1st Lieutenant J. S. Rotton, from the 6th Company 2d Battalion to the 3d Company 3d Battalion. 1st Lieutenant G. R. Scott, from the 3d Company 3d Battalion to the 4th Company 1st Battalion.

Head-quarters, Calcutta, January 18, 1822.

The appointment in Battalion Orders of the 22d ultimo, by Major Hampton, Commanding the 2d Battalion 20th Regiment Native Infantry, of Lieutenant H. D. Cox to act as Interpreter and Quarter Master to the Battalion during the absence on leave of Brevet-Captain and Interpreter and Quarter Master Davies, is confirmed.

Lieutenant G. W. Bonham is removed from the 2d to the 1st, and Lieutenant R. P. Fulcher from the 1st to the 2d Battalion 20th Regiment Native Infantry.

A continuance of these favorable circumstances adverted to in General Orders 17th February last, enables the Commander in Chief thus early to announce the indulgence of Furlough to the Native Troops of the Army: and it is peculiarly gratifying to His Lordship to have an opportunity so to extend the term usual for this indulgence, that the Native Soldiers placed at the more distant Stations from their places of nativity or family residence, may not be stinted in the means of visiting their homes and families.

On the receipt of this Order at Stations respectively, ten Privates, and two Non-Commissioned Officers in each Troop and Company, with a proportion of Native Commissioned Officers are to be allowed leave of absence until the 31st October, where Corps are stationed within the Jumna; but all Troops beyond that line, including those in Saugor, Nagpore and Cutch, are to have leave until the 30th November next.

Commanding Officers will be careful that leave is granted with strict regard to priority of claims, and will limit the time granted to individuals with reference to the distance of their homes and the nature of their business, so as to give the fairest operation to this indulgence.

The Officers Commanding in Nagpore, Saugor, Mhow, Neemutch and Rajpootannah are permitted to extend the proportion of Men on leave of absence to fifteen privates in each Troop or Company, if they find it practicable without material inconvenience to the public Service. Should on the other hand circumstances render it necessary to narrow the limits of the indulgence as granted by this Order, they are authorized to do so; reporting the same to Head-Quarters.

Officers and Men going on leave are to be reminded of the necessity of giving notice to their Regiments if Sickness should detain them at their homes, and of the penalties attached to overstaying their leave.

With the sanction of the Most Noble the Governor General, Lieutenant Francis Dibdin of 3d Regiment Light Cavalry is appointed to do duty with His Lordship's Body Guard.

The undermentioned Officers have leave of absence:

1st Battalion 3d Regiment.—Lieutenant J. Cracklow, from 15th February to 15th August, to visit the Presidency, preparatory to an application for Furlough.

2d Battalion 30th Regiment.—Lieutenant H. C. Clarkson, from 1st February to 1st September, to visit Ghazepore, on urgent private affairs.

2d Battalion 21st Regiment.—Major Alder, from 1st February to 1st May, in extension, to rejoin his Corps.

2d Battalion 10th Regiment.—Lieutenant J. W. Hull, from 15th January to 15th February, to visit the Presidency, on urgent private affairs.

Artillery.—Assistant Surgeon J. A. D. Watson, from 20th January to 20th March, to visit Saugor on urgent private affairs.

Head-quarters, Calcutta, January 19, 1822.

The undermentioned Officers have leave of absence:

Medical Staff.—Officiating Deputy Superintending Surgeon Hunter, from 6th February to 6th April, to visit Agra, on urgent private affairs.

European Regiment.—Brevet Captain Orchard, from 5th February to 5th May, to visit the Presidency, on urgent private affairs, and Captain Kirchoffer, from 5th February to 5th May, ditto, ditto.

Head-quarters, Calcutta, January 21, 1822.

Lieutenant G. H. Edwards of the 7th Native Infantry, is posted to the 1st Battalion of the Regiment.

Lieutenant J. D. Douglas of the 27th Native Infantry, is posted to the 1st Battalion of the Regiment.

The Superintending Surgeons and Deputy Superintending Surgeon, whose promotion and appointments are notified in Government General Orders of the 19th instant, are posted to Divisions, as follows:

Superintending Surgeon Robinson to the Nagpore Subsidiary Force.

Superintending Surgeon Durham to the Saugor Field Force.

Deputy Superintending Surgeon McDowell to the Rajpootannah Field Force.

The appointment by Lieutenant-Colonel Smith Commanding 1st Battalion 4th Regiment Native Infantry, in Battalion Orders of the 8th Instant, of Lieutenant and Brevet Captain J. Oakes to officiate as Interpreter and Quarter Master to the Corps during the absence of Lieutenant and Brevet Captain Hepworth is confirmed.

Assistant Surgeon Charles Dempster is directed to proceed to Cawnpore, and on his arrival to place himself under the orders of the Superintending Surgeon at that Station.

Cawnpore Station Orders dated the 11th instant, by Major-General Sir G. Martindell, K. B. C. directing Captain Ferris, Commissary Ordnance Commissariat, to detach with Lieutenant Dickson's Train Equipment 3 Sirdars and 30 Magazine Men as part of the Train Establishment, an equal number to be immediately entertained in their room for Magazine purposes, are confirmed.

The undermentioned officer has Leave of absence.

2d Battalion 19th Regiment.—Lieutenant and Interpreter and Quarter Master Lawrence, from 12th January, to 12th April, to visit the Presidency, on Medical Certificate.

W. G. PATRICKSON, Dy. Ajdt. Genl. of the Army.

Head-quarters, Calcutta, January 14, 1822.

Lieutenant Colonel Murray, 8th Dragoons, Deputy Adjutant General of His Majesty's Forces, has leave to proceed to Europe, for the recovery of his health, and to be absent on that account for two years from the date of his Embarkation.

Head-quarters, Calcutta, January 15, 1822.

Under the Rule laid down in the General Orders issued from the Department of the Adjutant General to His Majesty's Forces, dated Calcutta, the 5th November 1816, the Most Noble the Commander in Chief in India is pleased to promote the undermentioned Subaltern of 15 years standing and upwards to the Rank of Captain by Brevet in the East Indies only, from the 21st of September 1821.

8th Dragoons, Lieutenant Andrew Creagh.

Head-quarters, Calcutta, January 17, 1822.

The Most Noble the Commander in Chief in India is pleased to make the following appointments, until his Majesty's pleasure shall be made known.

14th Foot.—Ensign S. B. Heming, from the 50th Foot to be Ensign without purchase, vice A. Cooper, deceased, 2d December 1821.

59th Foot.—Henry Stanislaus LaRoche, Gent. to be Ensign without purchase, vice Heming, appointed to the 14th Foot, 2d December 1821.

Memorandum.—The appointment of Supernumerary Assistant Surgeon Benjamin Campbell, to be Assistant Surgeon in the 50th Foot, vice J. Evans, deceased, has not taken place.

Head-quarters, Calcutta, January 18, 1822.

Lieutenant Kent of H. M. 14th Foot has leave to proceed to Europe on his private affairs, and to be absent on that account for one year from the date of his embarkation.

Head-quarters, Calcutta, January 19, 1822.

Lieut. W. L. Carey of H. M. 17th Foot has permission to repair to the Presidency on sick certificate, and to be absent on that account for one month from the 1st proximo, or before the expiration of which should the state of his health require it, and be certified accordingly by the Medical Board, he is to make application for leave to proceed to Sea.

Head-quarters, Calcutta, January 21, 1822.

His Majesty has been pleased to appoint Major General Robert Alexander Dalzell to the Staff of the Army serving in the East Indies, in the room of Lieutenant General Sir Rufane Shaw Donkin.

Head-quarters, Calcutta, January 22, 1822.

With the sanction of Government, the Invalids, &c. allotted to the private ship Fairlie are to embark on Friday, the 25th instant, at the Cooly Bazar.

By Order of the Most Noble the Commander in Chief.

WM. CROKER, A. A. Genl.

PRICE OF BULLION.

Spanish Dollars,.....	Sicca Rupees	206	0	a	206	8	per 100
Doubleflons,.....	31	0	a	31	8	each	
Joes, or Pezas,.....	17	4	a	17	5	each	
Dutch Ducats,.....	4	4	a	4	12	each	
Louis D'Ors,.....	3	4	a	3	8	each	
Silver 5 Franc pieces,.....	191	4	a	191	8	per 100	
Star Pagodas,.....	3	6	a	3	7	6	each
Sovereigns,.....	10	8	a	10	12		
Bank of England Notes,.....	10	8	a	11	0		

Shipping Arrivals.

BOMBAY.

Date	Names of Vessels	Flags	Commanders	From Whence	Left
25	Upton Castle	British	R. Saxpitch	Bengal	
27	Georgiana	British	R. Babcock	Calcutta	Nov. 22
28	Glorioso	British	Patterson	Bengal	Nov. 10

Shipping Departures.

CALCUTTA.

Date	Names of Vessels	Flags	Commanders	Destination
Jan. 23	Flora	British	J. Sherrieff	Bombay

BOMBAY

Date	Names of Vessels	Flags	Commanders	Destination
24	Ternate	British	J. H. Grubb	Persian Gulph
27	Indian Trader	British	J. Ford	Tapanooly

The LA DELPHINE (French) arrived off Calcutta on Wednesday.

Stations of Vessels in the River.

JANUARY 23, 1822.

At Diamond Harbour.—BUSSORAH MERCHANT, outward-bound, remains.—EMILE (French) passed up.

Kedgeret.—TRAVANCORE, and FATTALBURY, outward-bound, remain.

New Anchorage.—H. C. Ships MARQUIS OF WELLINGTON, THOMAS GRENVILLE, PRINCESS CHARLOTTE OF WALES, and ROSE.—The two former sailed for England.

Saugor.—WILLIAM MILES, outward-bound, remains.

Military Arrivals and Departures.

Weekly List of Military Arrivals at, and Departures from, the Presidency.

Arrivals.—Major B. Latter, Rungpore Battalion, from Sea.—Captain W. S. Webb, Surveyor, from Kemaoon.—Lieutenant A. Davidson, 1st Battalion 7th Native Infantry, from Europe.

Departures.—Captain H. L. Playfair, Supt. Milty. Roads, to Chass.—Captain A. Macleod, Cuttack Legion, to Cuttack.—Captain E. Day, 2d Battalion 26th Native Infantry, to Cuttack.—Captain R. Armstrong, 1st Battalion 14th Native Infantry, to Pertabghur.—Captain P. Thomas, 1st Battalion 16th Native Infantry, to Europe.—Lieutenant E. S. Hawkins, 1st Battalion 19th Native Infantry, to Benares.

Marriage.

On the 19th instant, at St. John's Cathedral, by the Reverend D. CORRIE, Mr. JAMES GREENOUGH, to Miss ELIZABETH HORNER.

Births.

On the 23d instant, Mrs. JOHN GREENWAY, of a Daughter.

On the 18th instant, Mrs. PAUL D'MELLO, of a Son.

At Madras, on the 27th ultimo, the Lady of JOHN CARRUTHERS, Esq. of a Son.

At Berhampore, on the 20th ultimo, the Lady of Captain PERCEVAL DAVIE, of the 1st Battalion 24th Regiment of Native Infantry, of a Son.

At Madras, on the 19th ultimo, the Lady of Lieutenant Colonel J. COLESHOOK, C. B. Commanding Arcot, of a Son.

Deaths.

On the 20th instant, Captain JOHN ERNESTUS WEBSTER, 2d Battalion 23d Native Infantry.

At Lucknow, on the 7th instant, JOSEPH QUEIROS, Senior, in the Service of His Majesty the King of Oude, aged 61 years, 6 months and 8 days, leaving a large family to lament his irreparable loss.

At Madras, on the 1st instant, after a lingering illness of one month and ten days, (which attacked her after the delivery of a still-born child) which she bore with patience, resignation, and Christian fortitude, CATHERINE DEVING, the wife of Mr. J. DEVING, aged 39 years and 9 months.

At the Cape, on the 21st of October, Captain JOHN DAWES, of the Honorable Company's Bengal Infantry, aged 38 years.

Commercial Reports.

(From the Calcutta Exchange Price Current of yesterday.)

	Rs.	As.	Rs.	As.
Cotton, Catchoura,..... per maund	14	0	14	8
Grain, Rice, Patna,	2	0	2	2
Patchery, 1st,.....	2	4	2	8
Ditto, 2d,.....	1	12	1	14
Moongy, 1st,.....	1	7	1	9
Ditto, 2d,.....	1	2	1	5
Ballum, 1st,.....	1	3	1	4
Wheat, Dooda,.....	1	8	1	4
Gram, Patna,.....	1	2	1	3
Dhall, Urruhr, good,.....	1	10	1	12
Indigo, fine blue,.....	260	0	270	0
Ordinary ditto,.....	250	0	260	0
Fine purple and violet,.....	240	0	245	0
Ordinary ditto,.....	205	0	215	0
Dull blue,.....	185	0	195	0
Inferior purple and violet,.....	180	0	190	0
Strong copper,.....	200	0	210	0
Ordinary ditto,.....	160	0	170	0
Onde ordinary,.....	145	0	155	0
Saltpetre, Culme, 1st sort,.....	5	8	6	6
2d sort,.....	4	8	5	5
3d sort,.....	3	12	4	4

Indigo.—No alteration in prices have taken place since our last, and considerable sales have been effected during the week at our quotations—there is very little fine Indigo now in the market, second qualities are consequently getting more in demand—we yesterday heard of two sales, in all about 1200 maunds, at 245 to 248; and a sale of native Indigo, about 100 maunds, at 235—there were also some small parcels of Furruckabad Indigo, sold this week, at 210 to 175 per maund, according to quality, all in bond.

Cotton.—The market has been dull since our last, and the sales limited—it appears to be on the decline in the interior, the price quoted at Mirzapore on the 15th of January for new Cutchoura was 17-10 per local maund; and at Bogwongolah on the 19th of January it was stated at 12-8 to 13-12 per maund—sales during the week 6,500 maunds, 300 of which were for Calcutta, and the rest for country consumption—stock 31,000 maunds.—It is stated in the London Mercantile Price Current of the 7th of August 1821, that the demand for Surat Cotton had increased considerably, principally by speculators, whose operations were founded chiefly on the accounts from North America, stating that the quantity imported thence into England, will be much less this year than last; and it is supposed, that Surat will be wanted to supply the place of Bowed.—Total sales during the week ending 7th of August 5,600 bags of which there were 4000 Surat, and 1100 Bengal.

Saltpetre and Sugar.—Have been flat during the week, and the price of the latter may be stated at a trifling decline.

Pepper.—The demand for this has been limited through the week, it may be rated at our quotations.

Piece Goods.—Have been in fair demand since our last, but we have not many alterations to state in them this week—Mirzapoor Chints have advanced.

Freight to London.—May be rated at £4 to £5—and likely to advance.

COURSE OF EXCHANGE.

BUY.]	CALCUTTA,	[SELL.
*0 0 0 0	On London, 6 Months sight, per Sq. Rs.	0 0 0 0
	Bombay, 30 Days sight, per 100 Bombay Rupees,.....	92 *
	Madras, ditto, 94 4 95	Sicca Rupees, per 100 Madras Rupees, *
		*Nominal.
	Premium on Government Bills on the Court of Directors, 27	
	to 30 per cent.	
	Bank of Bengal Dividend last half Year,.....	5 6

As the state of the Exchange is now merely nominal, we have not ventured on any quotation.—Bills on London at 6 months sight, may be stated nominally at 2s. but even at that rate no Bills are procurable, and if Remittances to any extent were wanted, it is questionable whether they could be procured even at 1s. 11d.

Indigo.—Imported from 1st Sept. 1820 to 17th Jan. 1821, maunds 58,630
Imported from 1st Sept. 1821 to 16th Jan. 1822, 63,651

Increase..... 4,921